

sense very sharp) appears a broad, blunt, and very irregular end; not resembling a Cone, as is imagin'd, but onely a piece of a tapering body, with a great part of the top remov'd, or deficient. The Points of Pins are yet more blunt, and the Points of the most curious Mathematitall Instruments do very seldome arrive at so great a sharpness; how much therefore can be built upon demonstrations made onely by the productions of the Ruler and Compasses, he will be better able to consider that shall but view those points and lines with a Microscope.

Now though this point be commonly accounted the sharpest (whence when we would expresse the sharpness of a point the most superlatively, we say, As sharp as a Needle) yet the Microscope can afford us hundreds of Instances of Points many thousand times sharper: such as those of the hairs, and bristles, and claws of multitudes of Insects; the thorns, or crooks, or hairs of leaves, and other small vegetables; nay, the ends of the stirie or small parallelipeds of Amianthus, and alumen plumosum; of many of which, though the Points are so sharp as not to be visible, though view'd with a Microscope (which magnifies the Object, in bulk, above a million of times) yet I doubt not, but were we able practically to make Microscopes according to the theory of them, we might find hills, and dales, and pores, and a sufficient breadth, or expansion, to give all those parts elbow-room, even in the blunt top of the very Point of any of these so very sharp bodies. For certainly the quantity or extension of any body may be Divisible in infinitum, though perhaps not the matter.

But to proceed: The Image we have here exhibited in the first Figure, was the top of a small and very sharp Needle, whose point a nevertheless appear'd through the Microscope above a quarter of an inch broad, not round nor flat, but irregular and uneven; so that it seem'd to have been big enough to have afforded a hundred armed Mites room enough to be rang'd by each other without endangering the breaking one anothers necks, by being thrust off on either side. The surface of which, though appearing to the naked eye very smooth, could not nevertheless hide a multitude of holes and scratches and ruggednesses from being discover'd by the Microscope to invest it, several of which inequalities (as A, B, C, seem'd holes made by some small specks of Rust; and D some adventitious body, that stuck very close to it) were casual. All the rest that roughen the surface, were onely so many marks of the rudeness and bungling of Art. So unaccurate is it, in all its productions, even in those which seem most neat, that if examin'd with an organ more acute then that by which they were made, the more we see of their shape, the less appearance will there be of their beauty: whereas in the works of Nature, the deepest Discoveries shew us the greatest Excellencies. An evident Argument, that he that was the Author of all these things, was no other then Omnipotent; being able to include as great a variety of parts and contrivances in the yet smallest Discernable Point, as in those vaster bodies (which comparatively are called also Points) such as the Earth, Sun, or Planets. Nor need it seem strange that the Earth it self may be by an Analogie call'd a Physical Point: For as its body, though now

so near us as to fill our eyes and fancies with a sense of the vastness of it, may by a little Distance, and some convenient Diminishing Glasses, be made vanish into a scarce visible Speck, or Point (as I have often try'd on the Moon, and (when not too bright) on the Sun it self.) So, could a Mechanical contrivance successfully answer our Theory, we might see the least spot as big as the Earth it self; and Discover, as Des Cartes Diop. ch. also conjectures, as great a variety of bodies in the Moon, or Planets, as in the Earth.

But leaving these Discoveries to future Industries, we shall proceed to add one Observation more of a point commonly so call'd, that is, the mark of a full stop, or period. And for this purpose I observed many both printed ones and written; and among multitudes I found few of them more round or regular then this which I have delineated in the third figure of the second Scheme, but very many abundantly more disfigur'd; and for the most part if they seem'd equally round to the eye, I found those points that had been made by a Copper-plate, and Roll-press, to be as mishapen as those which had been made with Types, the most curious and smoothly engraven strokes and points, looking but as so many furrows and holes, and their printed impressions, but like smutty daubings on a matt or uneven floor with a blunt extinguish'd brand or stick's end. And as for points made with a pen they were much more rugged and deformed. Nay, having view'd certain pieces of exceeding curious writing of the kind (one of which in the breadth of a two-pence compris'd the Lords prayer, the Apostles Creed, the ten Commandments, and about half a dozen verses besides of the Bible, whose lines were so small and near together, that I was unable to number them with my naked eye, a very ordinary Microscope, I had then about me, inabled me to see that what the Writer of it had asserted was true, but withall discover'd of what pitifull bungling scribbles and scrambles it was compos'd, Arabian and China characters being almost as well shap'd; yet thus much I must say for the Man, that it was for the most part legible enough, though in some places there wanted a good fancy well prepos'd to help one through. If this manner of small writing were made easie and practicable (and I think I know such a one, but have never yet made tryal of it, whereby one might be inabled to write a great deale with much ease, and accurately enough in a very little roome) it might be of very good use to convey secret Intelligence without any danger of Discovery or mistrusting. But to come again to the point. The Irregularities of it are caused by three or four coadjutors, one of which is, the uneven surface of the paper, which at best appears no smother then a very coarse piece of shag'd cloth, next the irregularity of the Type or Ingravine, and a third is the rough Daubing of the Printing-Ink that lies upon the instrument that makes the impression, to all which, add the variation made by the Different lights and shadows, and you may have sufficient reason to ghes that a point may appear much more ugly then this, which I have here presented, which though it appear'd through the Microscope gray, like a great splatch of London dirt, about three inches over; yet to the naked eye it was black, and no bigger then that in the midst of the Circle A. And could I have found